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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

OCT 04 1996

LEGAL MATTER - PROMPT REPLY NECESSARY  
CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Mr. and Mrs. Ronald J. Grubbs  
P.O. Box 906  
Clinton, OK 73601

Re: Sooner Dial Superfund Site

Dear Mr. and Mrs. Grubbs:

The purpose of this letter is to inform you that the United States Environmental Protection Agency (EPA) has begun a cleanup action at the Sooner Dial Site (Site) under Superfund (also known as the Comprehensive Environmental Response, Compensation and Liability Act or CERCLA). The Site is a former aircraft dial refinishing facility located at 1002 South Tenth Street in the town of Clinton, Oklahoma. Information available to EPA indicates that you are the current owner of the Site.

As a result of the aircraft dial refinishing operations performed at the Site, the property has been impacted by Radium-226 contamination. Additionally, the property is located in a commercial area with residential properties adjacent to the Site. The Site was referred to EPA by the Oklahoma Department of Environmental Quality (ODEQ) on January 27, 1994. The EPA initiated a time-critical removal action at the Site pursuant to CERCLA Section 104, 42 U.S.C. § 9604, on August 27, 1996. The response action consists of the excavation and off-site disposal of contaminated soils.

Under Superfund, specifically Sections 106(a) and 107(a) of CERCLA, EPA is required to inform you as a current owner of the Site of your potential liability. The Action Memorandum authorizing and describing the removal action is included as Enclosure 2. If you have any questions concerning site activities, please contact the persons listed in Enclosure 1.

Sincerely yours,

Myron O. Knudson, P.E.  
Director  
Superfund Division

Enclosures (2)

9527436



**Enclosure 1**

**List of EPA Contacts:**

Mr. Carl Bolden (214) 665-6713  
Enforcement Officer  
Cost Recovery Section (6SF-AC)  
1445 Ross Ave  
Dallas, Texas 75202-2733

Mr. Keith Smith (214) 665-2157  
Superfund Attorney  
Superfund Division (6SF-DL)  
1445 Ross Ave.  
Dallas, Texas 75202-2733

Mr. Patrick Hammack (214) 665-2214  
On-Scene Coordinator  
Response & Prevention Branch (6SF-RP)  
1445 Ross Ave.  
Dallas, Texas 75252-2733

Enclosure 2

EPA Action Memorandum

6-71

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

**MEMORANDUM**

**SUBJECT:** Request for a Removal Action at the Sooner Dial Company Site, Custer County, Oklahoma

**FROM:** *Patrick L. Hammack*  
Patrick L. Hammack, Senior On-Scene Coordinator  
Site Response Section (6SF-R1)

**TO:** Myron Knudson, P.E. Director  
Superfund Division (6SF)

**THRU:** Charles A. Gazda, Chief *Charles A. Gazda*  
Response and Prevention Branch (6SF-R)

**I. PURPOSE**

This memorandum requests approval for a Removal Action pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, 42 U.S.C. § 9604, *et seq.*, at the Sooner Dial Company Site (Site) located in Clinton, Custer County, Oklahoma. The Site consists of the 1002 S. Tenth Street property where the Sooner Dial Company formerly operated, the Kite Shop located at 829 S. Tenth Street, and the surrounding residential and commercial properties where radium contamination has been found. The proposed action involves the excavation and off-site disposal of radium contaminated soil and the subsequent restoration of both the commercial and residential properties near the former facility.

This action meets the criteria for initiating a removal action under Section 300.415 of the National Contingency Plan (NCP), 40 CFR § 300.415. This action is anticipated to require less than twelve months and less than \$2 million to complete.

## II. SITE CONDITIONS AND BACKGROUND

CERCLIS # OKD987096591

Category of removal: Time-Critical

Site ID # AB

### A. Site Description

#### 1. Removal site evaluation

The Sooner Dial Company Site is the residential and commercial area surrounding the former Sooner Dial Company facility (Attachment 1). The Sooner Dial Company facility is a  $\frac{1}{4}$  acre property located in a commercial area of Clinton, Custer County, Oklahoma (Attachment 2). From the 1950's until 1969, the company refurbished aircraft instrument dials which contained radium-226 based luminous paint. The site is immediately adjacent to a resale shop and three residential properties. It was brought to the attention of the Environmental Protection Agency (EPA) Environmental Services Division (ESD) by the Oklahoma Department of Environmental Quality (ODEQ) in a January 27, 1994 letter from Mark Coleman to Russell Rhoades, Director of the ESD.

#### 2. Physical location

The Site is located in the City of Clinton, Oklahoma, in the vicinity of Wilson and Tenth Streets. The actual Sooner Dial Company facility was located at 1002 S. Tenth Street. The rough boundary of the Site extends beyond the former Sooner Dial Company facility property to the adjoining properties to the south and west and across the street to 829 S. Tenth St. where the company continued to operate. Detailed maps and drawings of the Site are included in the administrative record.

The actual Sooner Dial Company facility consisted of two buildings. One of the buildings has been demolished and was taken to the Ray Wichert (CERCLIS # OKD987095049) property. The second building remains at 1002 S. Tenth Street and is the current location of an automobile repair shop. Sooner Dial Company also operated at 829 S. Tenth Street which was included in the site report as the Kite Shop.

#### 3. Site characteristics

The Sooner Dial Company site was a facility which maintained aircraft instruments including the refinishing of instrument dials with radium-226 based luminous paint. The Sooner Dial Company began operation in 1950's and worked with Frank Say Airmotive, Inc., and/or Carruth Laboratories, Inc. at the 1002 S. Tenth Street address. Records indicate that the Sooner Dial Company actually performed the refinishing on dials provided by Frank Say Airmotive, Inc. and/or Carruth Laboratories, Inc.

The site building is currently occupied by an automobile body repair shop. The vacant lot adjacent to the automobile repair shop where the majority of the radium contamination exists is used to stage vehicles and automotive parts. A discount retailer occupies the building to the south of the vacant lot. Three residential properties are to the west of the site. A small area behind the Kite Shop is also contaminated.

As a result of the refinishing operations performed at the site, wide-spread Radium-226 soil contamination has been confirmed on the former facility property and on adjacent residential and commercial properties. The site area is not fenced and allows unrestricted access to the public.

4. Releases or threatened release into the environment of a hazardous substance, pollutant or contaminant

Releases of radium and radon have contaminated the approximately 1 acre of residential and commercial property within Clinton, Oklahoma. Radium and radon are listed hazardous substances as defined at Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) and further defined at 40 CFR § 302.4.

In March and April, 1995, U.S. EPA investigations were conducted to determine exposure levels associated with gamma radiation at the site. Exposure and dose measurements were made using a Ludlum 19 Micro R meter and thermoluminescent dosimeters (TLDs). The gamma radiation survey indicated areas in excess of 650 micro roentgen per hour ( $\mu\text{R/hr}$ ). National background concentrations in an uncontaminated area should have gamma reading between 10-15  $\mu\text{R/hr}$ . Radon sampling was also conducted in several indoor locations. Radon is a gaseous daughter of radium disintegration. Results did not indicate significant accumulations of radon within indoor areas.

5. NPL status

This Site is not presently on the National Priorities List (NPL). The Oklahoma State Department of Health (OSDH) conducted a Preliminary Assessment at the site. Due to the limited waste quantity, the small size of the facility, and limited targets, the site was removed from consideration for NPL ranking. However, should the site be ranked on the NPL in the future, the current removal actions are consistent with any remedial cleanup that might be taken due to the fact that the proposed actions constitute source removal measures.

## **6. Maps, Pictures and other graphic representations**

- Attachment 1**     Site sketch
- Attachment 2**     Site location map
- Attachment 3**     Oil & Hazardous Materials/Technical Assistance Database (OHM/TADS) Material Safety Data Sheets (MSDS) for Radium
- Attachment 4**     Agency for Toxic Substances and Disease Registry Consultation.
- Attachment 5**     Enforcement Addendum

### **B. Other Actions to Date**

#### **1. Previous actions**

Previous actions taken by or directed by Oklahoma State Department of Health (OSDH) are listed below. EPA has taken no previous response actions at the site.

#### **2. Current actions**

There are currently no actions taking place on the Site.

### **C. State and Local Authorities' Roles**

#### **1. State and local actions to date**

The facility has a long history of operational deficiencies identified during inspections by OSDH dating back to 1965. Additionally, the OSDH and reorganized State of Oklahoma Department of Environmental Quality (ODEQ) have performed site assessment activities, a PRP search and pursued a PRP cleanup of the site. After PRP negotiations were discontinued, ODEQ requested EPA assistance at the Sooner Dial Company Site.

#### **2. Potential for continued State/local response**

In a January 27, 1994 letter to Russell Rhoades, EPA Director of the Environmental Services Division, ODEQ Executive Director Mark Coleman requested EPA assistance in the evaluation and possible response action associated with contamination at the Sooner Dial Company Site. Additional response is expected by State and or local officials at the site in the form of monitoring the site conditions and community relations.

### **III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

#### **A. Threats to Public Health or Welfare**

The current conditions at the Site meet the following factors which indicate that the Site is a threat to the public health, welfare and the environment and a removal action is appropriate under Section 300.415(b)(2) of the National Contingency Plan, 40 CFR § 300.415(b)(2). Any or all of these factors may be present at a site yet any one of these factors may determine the appropriateness of a removal action.

##### **1. Exposure to Human Populations, Animals or the Food Chain, NCP Section 300.415(b)(2)(i)**

There is potential for exposure to human population as a result of radium contamination at the Sooner Dial Company site. Radium-226 is a radionuclide that emits ionizing radiation. Radium has a half-life of 1,620 years and a gaseous daughter, radon. Ionizing radiation has the potential for being a carcinogen, mutagen and teratogen, according to the Oil and Hazardous Materials/Technical Assistance Database (Attachment 3). Exposure of reproductive cells to ionizing radiation can cause gene mutations to occur in excess of the spontaneous mutation rate. Developmental defects have been observed in experimental animals exposed to ionizing radiation.

Human exposure can occur by one or more of the following mechanisms: 1) whole body tissue exposure from penetrating gamma radiation; 2) lung tissue exposure from the inhalation of radon; 3) lung tissue exposure from alpha-particles due to the inhalation of radium contaminated dust; and 4) digestive tract tissue exposure due to ingestion of radium contaminated soil. Gamma radiation levels at the site have been found at 650  $\mu$ R/hr, nearly 100 times background gamma radiation levels. Radium-226 concentrations have been found above the 5 picocuries per gram (pCi/g) action level in the vacant lot, alley and 2 residential properties. Sample results indicate radium-226 concentrations at 4,540 pCi/g within the vacant lot adjacent to the automobile body repair shop and three residential properties. Normal background radium concentration are approximately 1 pCi/g.

##### **2. Contamination of Drinking Water Supplies or Sensitive Ecosystems, NCP Section 300.415(b)(2)(ii)**

The radium contamination is within the City of Clinton, Oklahoma. All residences and businesses in the affected area are on city water.



3. Contaminants in Soils, NCP Section 300.415(b)(2)(iv)

Elevated levels of radium-226 are located in surface soils throughout the site and the adjacent businesses, alley and residential properties. Gamma radiation exposure can occur just by being in close proximity of the contaminated soils. Additionally, radium contaminated dust may be incidentally inhaled and/or ingested by humans especially with the hand-to-mouth behavior of young children playing in the contaminated residential lots.

4. Weather Conditions That May Cause the Release or Migration of Hazardous Substances, NCP Section 300.415(b)(2)(v)

There is the potential of wind-borne migration of the dust containing elevated radium-226 concentrations. Oklahoma is known for its windy and dusty conditions which can accelerate contaminant migration.

5. Availability of Other Mechanisms, NCP Section 300.415(b)(2)(vii)

By way of referral from ODEQ, EPA is be the only mechanism available to respond to the imminent and substantial endangerment posed by the hazardous substances located at the site. The State and local officials do not have the resources available to address the current situation. If other mechanisms become available during the response action, EPA will evaluate that mechanism as appropriate.

B. Threats to the Environment

There are no known threats to the environment relative to the elevated hazardous substances located in at the site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances, pollutants or contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to the public health, welfare, or the environment.

## V. PROPOSED ACTIONS AND ESTIMATED COSTS

### A. Proposed Actions

#### 1. Proposed action description

As discussed below, all of the actions to be taken on-site during this removal will comply with all applicable, or relevant and appropriate requirements (ARARs) to the extent practicable, considering the exigencies of the situation, and provide an effective mitigation of the imminent and substantial threats posed to the public health by the Site.

The proposed action involves the excavation and off-site disposal of all radium contaminated soil above 5 pCi/g to a depth of 15 cm and 15 pCi/g below 15 cm. All excavated areas will be backfilled with "clean" soil and brought back as close to its original contour and grade as practical. "Clean" soil is considered void of contaminants above background levels and will not constitute a health threat if used in a residential play area. Ground cover will be provided to "clean" backfill area to stabilize the soil and prevent erosion. Residential areas will be sodded with grass species present prior to excavation. The commercial areas of the site can either be sodded or seeded with grass. Landscaping plants removed during the removal action will be replaced with the best commercially available equivalent.

Off-site disposal will be accomplished by sending all radioactive contaminated soils to an appropriate disposal facility. All hazardous substances, pollutants or contaminants removed off-site pursuant to this action for treatment, storage, or disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, pursuant to CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and the following rule: "Amendment to the National Oil and Hazardous Substances Pollution Contingency Plan; Procedures for Planning and Implementing Off-Site Response Action: Final Rule" 58 FR 49200 (September 22, 1993), and codified at 40 CFR § 300.440.

All containers to be sent off-site for disposal will be packaged and labeled in accordance with RCRA requirements found at 40 CFR §§ 262.30-32 and will be properly manifested in accordance with the requirements set out in 40 CFR §§ 262.20-23. All transportation will be in accordance with Department of Transportation rules and regulations. See generally 40 CFR § 263.

Other requirements under the Occupational Safety and Health Act (OSHA) of 1970, 29 U.S.C. § 651 et seq., and under the laws of the State with plans approved under Section 18 of the State's OSHA laws, as well as other applicable safety and health requirements, will be followed. Federal OSHA requirements

include, among other things, Hazardous Materials Operation, 20 CFR Part 1910, as amended by 54 Fed. Reg. 9317 (March, 1989), all OSHA General Industry (29 CFR Part 1910) and Construction (29 CFR Part 1926) standards wherever they are relevant, as well as OSHA record keeping and reporting regulations, and the EPA regulations set forth in CFR Part 300, relating to the conduct of work at Superfund sites.

## **2. Contribution to remedial performance**

The proposed action is consistent with any conceivable remedial response since it will eliminate the source material and is expected to complete all necessary actions at the Site.

## **3. Description of alternative technologies**

There are no alternative technologies which could feasibly be applied.

## **4. Applicable or relevant and appropriate requirements**

The proposed removal action will be conducted to eliminate the actual or potential exposure to hazardous substance, pollutant or contaminant pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601 et seq., and in a manner consistent with the National Contingency Plan, 40 CFR Part 300, as required at 33 U.S.C. § 1321(c)(2) and 42 U.S.C. § 9605. As per 40 CFR Part 300.415(I), fund-financed removal actions under CERCLA Section 104, U.S.C. § 9604, and removal actions under CERCLA Section 106, U.S.C. § 9606 shall, to the extent practicable considering the exigencies of the situation, attain the applicable or relevant and appropriate requirements under Federal environmental law.

Due to the fact that consolidation and off-site disposal are the principal elements of this removal action, RCRA waste analysis requirements found at 40 CFR §§ 261.20 and 261.30, RCRA manifesting requirements found at 40 CFR § 262.20, and RCRA packaging and labeling requirements found at 40 CFR § 262.30, are deemed to be appropriate requirements for this removal action. National Ambient Air Quality Standards (NAAQS) found at 40 CFR § 50 will be used, as applicable, to protect the quality of air during the implementation of the action.

There are no regulatory cleanup standards directly applicable to the site. The site cleanup level for both the residential and commercial areas of the site are 5 pCi/g down to 15 cm soil depth and 15 pCi/g below 15 cm. The 5/15 pCi/g action level for the Sooner Dial site has been accepted by the Agency for Toxic Substances and Disease Registry (ATSDR) (Attachment 4). The Oklahoma Department of Environmental Quality also approves of the site cleanup level.

## 5. Project Schedule

The excavation, disposal of contaminated soil and restoration of the properties will last approximately two months. In order to take advantage of the warm dry weather, it will be necessary to start the project prior to September.

### B. Estimated Costs

#### Extramural Costs

ERCS .....	\$ 915,000
TAT .....	\$ 101,300
Subtotal, Extramural Costs .....	\$ 1,016,300
Extramural Costs Contingency (20%) .....	\$ 203,200
TOTAL, EXTRAMURAL COSTS .....	\$ 1,219,500

#### Intramural Costs

EPA Direct Costs .....	\$ 52,200
EPA Indirect Costs .....	\$ 104,400
TOTAL, INTRAMURAL COSTS .....	\$ 156,600
TOTAL, REMOVAL PROJECT CEILING .....	\$ 1,376,100

### VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If action is not taken at the Site, the residents and, in particular, the children playing in the yards will continue to be exposed to the gamma radiation and radium contaminated soil. As cited above, such exposure could possibly lead to adverse health effects including cancer.

### VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues associated with this Site.

### VIII. ENFORCEMENT

See Attachment 5.

**IX. RECOMMENDATION**

This decision document represents the selected removal action for the Sooner Dial Company Site, in Custer County, Oklahoma, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the criteria as defined by Section 300.415(b)(2) of the NCP, 40 CFR § 300.415(b)(2), for a removal, and I recommend your approval of the proposed removal action. The total project ceiling, if approved, will be \$1,376,100 of this, an estimated \$915,000 comes from the Regional removal allowance.

APPROVED

*Myrle D. K. Smith*

DATE:

8/22/96

DISAPPROVED

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DATE:

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